

Four Corners Air Quality Task Force
Cumulative Effects Workgroup Conference Call
July 24, 2006

Kevin Golden, EPA; Mike George, NPS; Mark Jones, NM; Mary Uhl, NM; Aaron Worstell, NPS; Doug Blewitt, BP; Kevin Briggs, CO APCD;NPS; Cindy Allen, CO APCD; John Reber, NPS; Craig Nicholls, BLM

The Cumulative Effects workgroup conducted a conference call to continue discussions from the July 13th call on the draft work plan for the group, and on the mitigation options that have been tagged for consideration by the CE workgroup.

Mike George drafted responses to the remaining mitigation measures that had not been covered in the July 13th discussion and emailed them to the group prior to the call. The workgroup generally agreed with Mike's draft. The workgroup will discuss a schedule for conducting these analyses in Cortez, but a firm schedule will be difficult to prepare until the group knows how many measures will be referred for review, and whether or not any contractor support will be available. Aaron W.(NPS) indicated that he may be able to obtain information on ammonia slip for consideration in the mitigation measures involving SCR. Craig N. (BLM) said that he will look into some work that TRC was doing to evaluate mitigation measures in Wyoming that may be applicable to the Four Corners area. Based on discussions Mike will edit the response for the tagged mitigation measures and re-send to the workgroup in the next few days. If there are no additional issues raised by workgroup members, the response will be posted on the FCAQTF website prior to the meeting in Cortez.

On the work plan Kevin Briggs indicated that he had talked with Gail Tonnesen at the University of California – Riverside to determine the costs of preparing CMAQ at 36 km resolution in the Four Corners area, and to determine costs for conducting 5 to 10 sensitivity runs to estimate the incremental effects of potential mitigation measures. The total cost would be in the neighborhood of \$90,000. Gail was also asked about the cost associated with preparing for and running CMAQ at a finer resolution, and she indicated that it would be a large work effort to prepare CMAQ inputs to run the model on a 12 km or smaller grid, and costs for that task could easily exceed an additional \$100,000.

Kevin Golden contacted TRC to determine the costs of improving the meteorological data set used in the San Juan Basin CBM EIS, and in running 5 to 10 mitigation scenarios through Calpuff/Calmet. The MM5 meteorological data for 2001-2003 is already being prepared by Environ for the Giant PSD Increment modeling study and could be converted for use in the FCAQTF study area (San Juan Basin EIS domain) area quite easily. The costs for integrating the 2001-2003 meteorology data into Calpuff and making 5-10 mitigation runs would cost about \$50,000.

The workgroup discussed the pros and cons of each approach. CMAQ has a far more advanced treatment of atmospheric chemistry than Calpuff. It is generally considered a

state-of-the-science model. On the other hand, the 36 km resolution may well have difficulty showing the effects of mitigation measures on air quality in the Four Corners area. Reprocessing the WRAP modeling to run on a finer grid (12 km or less) would likely be too resource intensive for the AQTF to pursue in the short term.

Calpuff is essentially a point source model and does not rely on grids for evaluating the impact of sources, which can provide for finely resolved results. However, it has a chemistry algorithm that is not as advanced as that in CMAQ, and this chemistry issue cannot be corrected. Calpuff is EPA's designated model for long-range transport modeling and is being used extensively for oil and gas impact modeling in the West.

Poor meteorological data that was used in the San Juan Basin EIS modeling can be upgraded by using the 2001-2003 MM5 data and integrating surface observations from the Four Corners area for little additional cost.

The majority of participants felt that from a pragmatic standpoint Calpuff was the best option; however the group could not reach a consensus. To resolve the issue both options will be written up and submitted to the oversight group for the Four Corners Task Force, and a decision will perhaps be made at the Cortez meeting.